SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, AND 30

1. REQUISITION NUMBER: W56MES-5021-6063

2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NUMBER	6. SOLICITATION ISSUE DATE
W911XK-05-P-0030	31-Mar-2005		W911XK-05-T-0019	24-Feb-2005

7. FOR SOLICITATION INFORMATION CALL:	a. NAME	b. TELEPHONE NUMBER *(No Collect Calls)*	8. OFFER DUE DATE/LOCAL TIME
	SAMMIE HART	313 226-6358	02:00 PM 11 Mar 2005

9. ISSUED BY CODE W911XK

CONTRACTING DIVISION
DETROIT DISTRICT, USAED P.O. BOX 1027
DETROIT MI 48231-1027

TEL: (313) 226-5148
FAX: (313) 226-2209

10. THIS ACQUISITION IS
[ ] UNRESTRICTED
[X] SET ASIDE: 100 % FOR
[X] SMALL BUSINESS
[ ] HUBZONE SMALL BUSINESS
[ ] 8(A)

NAICS: 333911
SIZE STANDARD:500

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
[ ] SEE SCHEDULE

12. DISCOUNT TERMS
Net 30

[ ] 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)

13b. RATING

14. METHOD OF SOLICITATION
[X] RFQ [ ] IFB [ ] RFP

15. DELIVER TO CODE
SOO AREA OFFIC
ST. MARY'S FALLS CANAL
SAULT STE. MARIE MI 49783

16. ADMINISTERED BY CODE

SEE ITEM 9

17a.CONTRACTOR/OFFEROR CODE 1R2L8

KENNEDY INDUSTRIES
.
4975 TECHNICAL DRIVE
MILFORD MI 48381

TEL. 248-684-1200
FACILITY CODE 1R2L8

18a. PAYMENT WILL BE MADE BY CODE T0B0200

U S ARMY CORPS OF ENGINEERS FINANCE AND
5700 WASP AVENUE
MILLINGTON TN 38054

[ ] 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK BELOW IS CHECKED [ ] SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/ SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	SEE SCHEDULE				

25. ACCOUNTING AND APPROPRIATION DATA

See Schedule

26. TOTAL AWARD AMOUNT (For Govt. Use Only)

$56,120.00

[ ] 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1. 52.212-4. FAR 52.212-3. 52.212-5 ARE ATTACHED. ADDENDA [ ] ARE [ ] ARE NOT ATTACHED

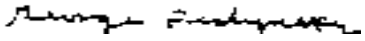
[ ] 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA [ ] ARE [ ] ARE NOT ATTACHED

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES
[ ] TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.

29. AWARD OF CONTRACT: REFERENCE
[ ] OFFER DATED . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR

31a.UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)



31c. DATE SIGNED
31-Mar-2005

30b. NAME AND TITLE OF SIGNER
(TYPE OR PRINT)

30c. DATE SIGNED

31b. NAME OF CONTRACTING OFFICER *(TYPE OR PRINT)*
GEORGE FEDYNSKY / ADDED BY SUMI
TEL: 313 226-6356 EMAIL: George.Fedynsky@lre02.usace.army.mil

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/ SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	SEE SCHEDULE				

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED ☐ INSPECTED ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE
	32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER ☐ PARTIAL ☐ FINAL	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT ☐ COMPLETE ☐ PARTIAL ☐ FINAL	37. CHECK NUMBER

38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY *(Print)*	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT *(Location)*	
		42c. DATE REC'D *(YY/MM/DD)*	42d. TOTAL CONTAINERS

Section SF 1449 - CONTINUATION SHEET

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Poe Lock & Davis Lock Pump/Impeller Repairs Contact Person: Joseph Pintal (906) 635-3445	1	Lump Sum	$56,120.00	$56,120.00
				NET AMT	$56,120.00
	ACRN AA Funded Amount				$56,120.00

FOB: Destination

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	16-MAY-2005	1	SOO AREA OFFIC ST. MARY'S FALLS CANAL SAULT STE. MARIE MI 49783 FOB: Destination	

ACCOUNTING AND APPROPRIATION DATA

AA: 96X31230000 082427 2570K6183K017380 NA 96203
COST CODE: 000000000000
AMOUNT: $56,120.00

CLAUSES INCORPORATED BY REFERENCE

52.211-13	Time Extensions	SEP 2000
52.212-4	Contract Terms and Conditions--Commercial Items	OCT 2003
52.212-5	Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items	JAN 2005
252.204-7004 Alt A	Required Central Contractor Registration (52.204-7) Alternate A	NOV 2003
252.212-7001	Contract Terms and Conditions Required to Implement Statutes or Executive Orders Applicable to Defense Acquisitions of Commercial Items	JAN 2005

SCOPE OF WORK

SCOPE OF WORK
POE LOCK AND DAVIS LOCK PUMP/IMPELLER REPAIRS

1. POE LOCK PUMP/IMPELLER REPAIRS

History
The two pumps used in the Poe well at the St. Mary's Falls Canal were manufactured by Tampa Shipbuilding Company in approximately 1942. They are each 30" Axial Flow Pumps that are connected directly through rigid couplings and line shafts to 300 hp, 900-rpm vertical electric motors. The pump drive shafts are encased in enveloping pipes, which seal the bearings. These pumps have been rebuilt before, time unknown.

Current Condition
Reference drawing number D2-27-03 *30" Axial Flow Pump Assembly*.
PUMP NO. 2: The lower pump section has been removed. This lower section contains item numbers 1-9. In removing the components it has been found that there is significant wear in the majority of the components. Particles were discovered in the pump bowl bearing assembly (Items 6, 7, & 8). The particles were composed mainly of bronze chips produced from the bearing surface of the bushing (Item 7) as can be seen in picture 1. Picture 2 shows the damage these particles have done to the surface of the shaft (Item 10). Picture 3 shows a crack in the pump bowl (Item 5) that appears to have been welded at a previous time. The pump bowl (item 5) also has a worn wear ring (see picture 4). This wear ring is not shown on the original drawing because it was added later, however drawing number D1-27E-02 *Bushing - 30" Pumps* (Oct. 1950) shows the specifications for this ring. This wear ring was installed for reasons unknown (possibly because of impeller wear or a smaller impeller was installed). The impeller (Item 3) for this pump is very worn. Each blade of the impeller has cavitations on both sides and there is a crack in one blade (see picture 5). The outer diameter of the impeller is also worn and there is nearly ¼" gap between the outside edge of the impeller and the inside edge of the wear ring.

PUMP NO. 1: The overall condition of this pump is very similar to Pump No. 2. The wear ring has similar wear. The impeller (Item 3) is worn and has a crack in it. The edges of the veins in the bowl appear battered.

SPECIAL NOTE: The lower pump shaft for the Poe Lock pump cannot be removed from the well. Therefore, the contractor will have to perform on-site measurements of the shaft.

Repair Plan (Contract Line Item 1)

After contract award, the Contractor shall clean and inspect the lower portion of each pump including testing for cracks. At their discretion and at their own expense, the contractor may ship selected pump components to their facility. The contractor is responsible for a thorough site investigation including taking all measurements necessary for the work. The contractor shall evaluate and furnish recommendations for approval in a written report within two weeks of receiving contract award. The report shall include:
1. Report on condition

2. What function(s) does the wear ring serve and should we retain it?
3. How much of an effect does the undersized impeller have on the GPM (Gallons per minute)?
4. Recommendations and cost estimates for rebuilding/replacing the impeller and wear ring.
5. Furnish a plan for conducting a flow test on the pump after installation.
6. Provide an estimate of the time required to complete delivery.

Repair/Replace Parts and Testing (Contract Line Item 2)

Implement the approved Repair and Testing Plan as described above. Include, as a minimum:
1. Repair the edges of the veins on the bowls.
2. Install new/rebuilt wear rings.
3. Furnish new/rebuilt bearings built to the existing shaft dimensions.
4. Provide a new or repaired impeller (Item 3) that is properly balanced and impeller nut (Item 4).
5. The pump shall be balanced by a certified pump (impeller) company.
6. All items shall receive a protective coating as approved by the Government.
7. Perform a test to measure the flow rate after installation of the pump.
8. Contractor will be responsible for all shipping costs.

Copies of pump drawings and photos of units will be furnished by the Government.

The Government will repair Suction Bell, obtain and install new Seals and rebuild the Retainer Ring. The Government will install the rebuilt or replacement pump.

2. DAVIS LOCK PUMP/IMPELLER REPAIRS

History

The Alberger Pump & Condensor Company manufactured the three main pumps used in the Davis well at the St Mary's Falls Canal in approximately September 1914. They are each 30" 'double suction volute' pumps that are connected through rigid couplings and line shafts. The shafts are not encased. It appears that the impellers in these pumps have not been rebuilt. The serial number for pump 1 is 5484, pump 2 is 5482, and pump 3 is 5483. It should be noted that pump 1 and 3 turn counter clockwise and pump 2 turns clockwise. The motors on the pumps are manufactured by General Electric and the description tag reads 592,281, Type 1, Class 18, 300-400, 390 amps @ 440 volts, no load speed 400 rpm, full load speed 390 rpm, pat. Pend. 1900, 1902. Based on the charts for the pumps they appear to have a flow rate of 30,000 to 35,000 GPM. Note they are a variable speed motor. Refer to the following drawings for reference:

D3-27-02 *Pump Well Machinery*
D3-27-21 *30" Double Suction Vertical Volute Pump Sectional Elevation*
D3-27-30 *30" Double Suction Volute Pump Shaft*
D3-27-31 *30" Double Suction Volute Pump Casing*
D3-27-36 *30" Double Suction Volute Pump Upper & Lower Head*
D3-27-37 *30" Double Suction Volute Pump Lower Bearing*
D3-27-38 *30" Double Suction Volute Pump Upper Bearing*
D3-27-52 *30" Double Suction Volute Pump Impeller*

Current Condition

Pump #1
This pump has not been disassembled. Expect to find bad impeller as well as bearings.

Pump #2
Shaft needs to be rebuilt; wear rings appear to be ok. Upper and lower bearings need to be rebuilt (need new Babbitt). Impeller needs to be repaired-fins cracked or worn in spots (see picture 6).

Pump #3
Upper bearing half cracked into 2 pieces (see picture 7). Babbitt material in this bearing is missing. Lower Babbitt bearing has no Babbitt material left in it (see picture 8). Shaft needs to be rebuilt as well as the wear rings (see picture 9). Impeller blades are in worse condition in comparison to pump #2 (see picture 10).

Repair Plan (Contract Line Item 1)

The Repair Plan requirements for the Davis Lock pumps are the same as those for the Poe Lock pumps with the following exceptions. The Davis Lock pumps will retain the wear rings and do not have undersized impellers; therefore, items 2 and 3 are irrelevant.

Repair/Replace Parts and Testing (Contract Line Item 2)

Implement the approved Repair and Testing Plan as described above. Include, as a minimum:
1. Furnish new/rebuilt bearings built to the existing shaft dimensions and rebuild and/or replace cracked bearing housings.
2. Repair and/or replace the impeller.
3. Provide rebuilt and/or replacement wear rings.
4. Test birdcage assembly for cracks, repair if necessary.
5. The impeller shall be balanced by a certified pump (impeller) company.
6. All items shall receive a protective coating as approved by the Government.
7. Test and provide a flow rate of the rebuilt pump (this can be done on-site or at the government's facility once the pump is installed).
8. Contractor will be responsible for all shipping costs.

Copies of pump drawings and photos of units will be furnished by the Government.

The Government will obtain and install new Seals and install the rebuilt or replacement pump.

3. ADDITIONAL REQUIREMENTS FOR QUOTES

Each offeror shall furnish a quote explaining the plan for contract performance to include technical specifications for components, installation methods and a detailed cost breakdown showing labor, material and markups. Offerors may propose to rebuild or replace pump components in order to provide the best value to the Government. Offerors are to indicate the types of replacement materials proposed to be used.

The quote must contain cost breakdowns for all replacements and repairs for each pump component for comparison purposes. Replacement pumps must be engineered with existing plumbing (the discharge lines). The quote will describe testing methods for the metallurgical condition of parts and list the parts that will be tested. The Government will ultimately decide whether pumps or pump components will be repaired or replaced. Award will be made to the lowest responsible vendor.

There will be two lump sum contract line items.

0001 Repair Plan
0002 Repair/Replace Parts and Testing

The proposals should be structured so that all costs associated with the project are logically organized and included under one of these contract line items.

It is highly recommended that offerors visit the site prior to submitting a quote. Offerors can inspect the pumps and see the location where the pumps were installed. Site visits may be arranged during normal duty hours by contacting Mr. Joseph Pintal, Assistant Chief, Shops Yards and Mechanical Section, Sault Ste. Marie Area Office at 906-635-3445.